

Title (en)

ROTARY HOLDING DEVICE FOR GRIPPING TOOL MATERIAL AT ELEVATED TEMPERATURES THROUGH MULTIPLE COLLAR ASSEMBLY

Title (de)

DREHBARE HALTEVORRICHTUNG ZUM ANFASSEN VON WERKZEUGMATERIAL BEI HOHEN TEMPERATUREN ANHAND EINER ANORDNUNG AUS MEHREREN ROSETTEN

Title (fr)

DISPOSITIF DE MAINTIEN ROTATIF DESTINÉ À SAISIR UN MATÉRIAU D'OUTIL À DES TEMPÉRATURES ÉLEVÉES AU MOYEN D'UN ENSEMBLE COLLIER MULTIPLE

Publication

EP 2323801 A4 20170301 (EN)

Application

EP 09806965 A 20090811

Priority

- US 2009004616 W 20090811
- US 8791608 P 20080811

Abstract (en)

[origin: WO2010019231A1] A tool is provided that is capable of friction stir processing, friction stir mixing, and friction stir welding of high melting temperature and low melting temperature materials, wherein the collar is now divided into at least an inner and an outer collar coupled to the shank and the FSW tip, wherein new thermal barriers enable expansion of the inner collar to be directed inward to thereby create compression on the FSW tip instead of allowing the FSW tip to become loose in the tool at elevated temperatures.

IPC 8 full level

B23K 20/12 (2006.01)

CPC (source: EP US)

B23K 20/1255 (2013.01 - EP US)

Citation (search report)

- [XAI] US 2007102492 A1 20070510 - NELSON TRACY W [US], et al
- [A] US 5697544 A 19971216 - WYKES DONALD H [US]
- See references of WO 2010019231A1

Designated contracting state (EPC)

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DOCDB simple family (application)

US 2009004616 W 20090811; CA 2733025 A 20090811; CN 200980135791 A 20090811; EP 09806965 A 20090811; JP 2011522991 A 20090811; US 58300509 A 20090811